

## Professional Vita

(short version)

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Born in 1953. Citizen of the United States.

### Education

- Ph.D. (Computer Science), Northwestern University, 1984.
- M.S. (Computer Science), Northwestern University, 1982.
- B.A. (Mathematics), University of Vermont, 1976.

### Experience

- Scientific staff, Mathematics and Computer Science Division, Argonne National Laboratory:
  - Senior Computer Scientist, 1998–present.
  - Computer Scientist, 1987–1998.
  - Assistant Computer Scientist, 1984–1987.
- Senior Research Fellow, Argonne-University of Chicago Computation Institute, 1999–present.
- Royal E. Cabell Research Fellowship, Northwestern University, 1983–1984.

### Research Interests

- Automated theorem proving: applications, experimentation, implementation, theory.
- Set theory, logic, and induction.
- Parallel algorithms for symbolic computation.
- The QED project.

### Professional Activities

- Secretary, Association for Automated Reasoning, 1986–1993.
- Editorial Board, *Journal of Automated Reasoning*, 1997–.
- Program chair, 14th International Conferences on Automated Deduction (CADE), 1996.
- Board of Trustees, Conference on Automated Deduction, 1996–2000.

## Books

1. W. McCune and R. Padmanabhan. *Automated Deduction in Equational Logic and Cubic Curves*, volume 1095 of *Lecture Notes in Computer Science (AI subseries)*. Springer-Verlag, Berlin, 1996.
2. W. McCune, editor. *Proceedings of the 14th International Conference on Automated Deduction*, volume 1249 of *Lecture Notes in Computer Science (AI subseries)*. Springer-Verlag, Berlin, 1997.

## Selected Articles

1. W. McCune and L. Henschen. Maintaining state constraints in relational databases: A proof theoretic basis. *J. ACM*, 36(1):46–68, 1989.
2. W. McCune and L. Wos. The absence and the presence of fixed point combinators. *Theoretical Computer Science*, 87:221–228, 1991.
3. W. McCune. Experiments with discrimination tree indexing and path indexing for term retrieval. *J. Automated Reasoning*, 9(2):147–167, 1992. Invited paper.
4. W. McCune. Single axioms for the left group and right group calculi. *Notre Dame J. Formal Logic*, 34(1):132–139, 1993.
5. W. McCune. Single axioms for groups and Abelian groups with various operations. *J. Automated Reasoning*, 10(1):1–13, 1993.
6. R. Padmanabhan and W. McCune. Automated reasoning about cubic curves. *Computers and Mathematics with Applications*, 29(2):17–26, 1995.
7. W. McCune and A. D. Sands. Computer and human reasoning: Single implicative axioms for groups and for Abelian groups. *American Mathematical Monthly*, 103(10):888–892, December 1996.
8. W. McCune. 33 basic test problems: A practical evaluation of some paramodulation strategies. In Robert Veroff, editor, *Automated Reasoning and its Applications: Essays in Honor of Larry Wos*, chapter 5, pages 71–114. MIT Press, 1997.
9. W. McCune. Solution of the Robbins problem. *J. Automated Reasoning*, 19(3):263–276, 1997.
10. W. McCune. Automatic proofs and counterexamples for some ortholattice identities. *Information Processing Letters*, 65:285–291, 1998.
11. W. McCune and O. Shumsky. IVY: A preprocessor and proof checker for first-order logic. In M. Kaufmann, P. Manolios, and J. Moore, editors, *Computer-Aided Reasoning: ACL2 Case Studies*. Kluwer Academic, 2000. To appear.

## Selected Invited Presentations

- *Searching for Fixed Point Combinators with the Kernel Strategy*. 5th Annual IEEE Symposium on Logic in Computer Science (LICS), University of Pennsylvania. June 5, 1990.
- *Well Behaved Search and the Robbins Problem*. International Conference on Rewriting Techniques and Applications (RTA'97), Sitges, Spain. June 2, 1997.
- *Automatic and Practical Equational Deduction*. Fifth International Symposium on Artificial Intelligence and Mathematics, Fort Lauderdale, Florida. January 4, 1998.